# Supplemental Materials: Surveys

Horizontal lines represent section breaks where participants were required to press ‘Next’. Participants could not progress from one section to the next until all of the questions in the section had been answered.

## Demographic Questions

**(These questions were common to both surveys and were shown where indicated.)**

How old are you?

 [ Single-line free text entry ]

What is your gender?

 Female / Male / I think of myself in another way

In which country do you live?

 <Select box containing countries>

Which statement best describes how important money from crowd work is to you?

* Money from crowd work is nice, but doesn’t really change my circumstances
* Money from crowd work is a way for me to pay for nice extras
* Money from crowd work is sometimes necessary to make basic ends meet
* Money from crowd work is always necessary to make basic ends meet

On average, on how many days per week do you do crowd work? (Regardless of how long you spend each day)

 Less than once per week

 1 day per week

 2 days per week

 3 days per week

 4 days per week

 5 days per week

 6 days per week

 7 days per week

On the days that you do crowd work, how much time do you typically spend doing it?

 [ Single line free text ]

On the days that you do crowd work, how long do you typically earn, in US Dollars?

 [ Single line free text ]

For how many years have you been doing crowd work regularly (at least 3 times per month)?

 I don't do crowd work regularly

 Less than 1 year

 About 1 year

 About 2 years

 About 3 years

 About 4 years

 About 5 years, or longer

What is your annual household income?

 10,000 USD or less

 10,000 - 20,000 USD

 20,001 - 30,000 USD

 30,001 - 40,000 USD

 40,001 - 50,000 USD

 50,001 - 60,000 USD

 60,001 - 70,000 USD

 70,001 - 80,000 USD

 More than 80,000 USD

## Survey 1, Worker Perspective

In this task we'll ask you to reflect on your experience of doing "crowd work" on platforms like Figure 8.

When you answer the questions, please think about your experiences of using "crowd work" platforms like Figure 8, Amazon Mechanical Turk, CrowdFlower, or anything similar.

This survey will take about 15 minutes, and you will receive $1.50 in return.

**Please answer all of the questions in English.**

 <Participant Information & Consent form>

 <Demographics, see above>

This survey is about fairness.

Fairness means treating people equally or in a way that is right or reasonable.

Think about how fairly you are treated, and how fairly you are rewarded, when doing crowd work.

Do you think that you are paid a fair amount for doing crowd work?

 Yes, almost all of the time

 Most of the time

 Sometimes, about 50:50

 Occasionally

 No, never or very rarely

Do you think that you are treated fairly by task requesters (the people who set tasks) when you're doing crowd work?

 Yes, almost all of the time

 Most of the time

 Sometimes, about 50:50

 Occasionally

 No, never or very rarely

Do you think that you are treated fairly by crowd work platforms (like Figure8, Amazon Mechanical Turk, or CrowdFlower) when you're doing crowd work?

 Yes, almost all of the time

 Most of the time

 Sometimes, about 50:50

 Occasionally

 No, never or very rarely

Overall, would you say that crowd work is fair to people like you?

 Yes, almost all of the time

 Most of the time

 Sometimes, about 50:50

 Occasionally

 No, never or very rarely

What are some ways, if any, that you have been treated UNFAIRLY as a crowd worker in the past?

 [ Multi-line free text entry ]

What are some ways, if any, that platforms or requesters could make crowd work FAIRER?

 [ Multi-line free text entry ]

Does the FAIRNESS of a task influence your decision to work on it? What are some reasons for your answer?

 [ Multi-line free text entry ]

Thank you for your answers so far! This is the last section.

Please consider the task below. We have proposed three scenarios, which all relate to the same basic task. Please read the task, and then click Next to answer some questions about each scenario.

Researchers are trying to improve diagnosis of a rare disease by training a computer to spot diseased cells. Crowd workers will be shown images from a microscope and asked to classify them as either "diseased" or "not diseased".

The results of this task will be used to create a better screening tool, to accurately diagnose whether people have the disease.

Researchers are trying to improve diagnosis of a rare disease by training a computer to spot diseased cells. Crowd workers will be shown images from a microscope and asked to classify them as either "diseased" or "not diseased".

The results of this task will be used to create a better screening tool, to accurately diagnose whether people have the disease.

Scenario A

A privately-owned medical device manufacturer will manage this task.

The average hourly pay for this task will be about $8.50, and total expenditure on crowd workers will be $127,500.

The company expects to make a worldwide profit of US $9million using their new diagnosis tool over the next 5 years.

Immediate pay: $8.50

Total pay: $8.50 / hour

How FAIR would you say Scenario A is?

 Very UNFAIR

 Quite UNFAIR

 Neither Fair nor Unfair

 Quite FAIR

 Very FAIR

What are some things, if any, that are FAIR about Scenario A?

 [ Multi-line free text entry ]

What are some things, if any, that are UNFAIR about Scenario A?

 [ Multi-line free text entry ]

Researchers are trying to improve diagnosis of a rare disease by training a computer to spot diseased cells. Crowd workers will be shown images from a microscope and asked to classify them as either "diseased" or "not diseased".

The results of this task will be used to create a better screening tool, to accurately diagnose whether people have the disease.

Scenario B

A private company will manage this task.

The average hourly pay for this task will be about $1.50, and total expenditure on crowd workers will be $22,500.

In addition, the company will distribute 3.0% of the annual profit made from the new tool to the crowd workers who helped to train it, based on the number of tasks each worker completed.

The company expects to make a worldwide profit of US $9million using their new diagnosis tool over the next 5 years. Assuming the company makes $9million, $270,000 would be distributed to crowd workers, roughly $18 per hour worked. However, if the company does not make a profit workers would only receive the first $1.50.

Immediate Pay: $1.50

Year 1: $0.00

Year 2: $2.50

Year 3: $4.00

Year 4: $5.00

Year 5: $6.50

Total pay: $19.50 / hour

How FAIR would you say Scenario B is?

 Very UNFAIR

 Quite UNFAIR

 Neither Fair nor Unfair

 Quite FAIR

 Very FAIR

What are some things, if any, that are FAIR about Scenario B?

 [ Multi-line free text entry ]

What are some things, if any, that are UNFAIR about Scenario B?

 [ Multi-line free text entry ]

Researchers are trying to improve diagnosis of a rare disease by training a computer to spot diseased cells. Crowd workers will be shown images from a microscope and asked to classify them as either "diseased" or "not diseased".

The results of this task will be used to create a better screening tool, to accurately diagnose whether people have the disease.

Scenario C

A publicly-funded research University will manage this task.

The average hourly pay for this task will be about $8.50, and total expenditure on crowd workers will be $127,500.

The University will develop their own tool that will be made available to publicly-funded hospitals "at cost" (i.e. not for a profit).

The University will make the dataset publicly available, so that any manufacturer can use it to develop new products.

Immediate pay: $8.50

Total pay: $8.50 / hour

How FAIR would you say Scenario C is?

 Very UNFAIR

 Quite UNFAIR

 Neither Fair nor Unfair

 Quite FAIR

 Very FAIR

What are some things, if any, that are FAIR about Scenario C?

 [ Multi-line free text entry ]

What are some things, if any, that are UNFAIR about Scenario C?

 [ Multi-line free text entry ]

Which of the three scenarios would you say is the FAIREST?

 Scenario A: Private company, immediate pay

 Scenario B: Private company, profit-linked pay

 Scenario C: Research University, immediate pay

Which of the three scenarios would you most LIKE to participate in, as a crowd worker?

 Scenario A: Private company, immediate pay

 Scenario B: Private company, profit-linked pay

 Scenario C: Research University, immediate pay

What are some reasons for your answers?

 [ Multi-line free text entry ]

## Survey 2: Trustee Perspective

In this task we'll ask you to think about how organisations should use the data that crowd workers create on online crowd work platforms.

When you answer the questions, please think about your experiences of using "crowd work" platforms like Figure 8, Amazon Mechanical Turk, CrowdFlower, or anything similar.

This survey will take about 15 minutes, and you will receive $1.50 in return.

**You must answer all of the questions in English. If some or all of your answers are not in English, your job will be rejected.**

 <Participant Information & Consent form>

 <Demographics, see above>

Thank you for your answers so far! This is the last section.

Read this scenario carefully.

A rare disease affects what cells look like under a microscope. 1.5 million pictures of cells have already been classified by crowd workers into 'healthy' or 'diseased'. The classified pictures are useful to people that want to research the disease.

It took about 12,600 hours of crowd workers time to create the database.

Crowd workers did not get paid to do the work, but they will be paid 'royalties' when the pictures are used.

We want you to imagine that different organisations are interested in using the classified pictures. We'd like to know whether you think each organisation should be allowed to use the pictures, how much you think they should pay to use them, and whether you'd like to ask them any questions before deciding.

Please read the descriptions of the organisations and answer the questions. Please take your time and give as much detail as you can, this is the last part of the questionnaire.

< Scenario text, above, repeated; for reference >

[ The four organisations below were presented in a random order, and all on the same page so that participants were free to scroll up and down to compare their answers. ]

**Rare Disease Research Lab**

The Rare Disease Research Lab is part of a University medical research centre. They are based in the USA.

The Rare Disease Research Lab can use the classified pictures to understand more about the Rare Disease. They will not develop new medicines or technology, but they might make discoveries that could help others to develop medicines or technology in the future.

Total budget: $500,000

Expected profit (5 years): None, findings will be shared with scientists around the world for free.

Should Rare Disease Research Lab be allowed to use this dataset?

 No, definitely not

 No, probably not

 Maybe, I'm not sure

 Yes, probably

 Yes, definitely

Roughly how much do you think Rare Disease Research Lab should pay to use the dataset for this purpose? Please enter your answer in US Dollars.

 [Single-line free text entry. Additionally, a widget below the text input parsed the entered number and displayed text such as “If BioViz pays $1,000,000.00, each crowd worker will receive $79.37 for each hour that they worked.” ]

What are some things that you would like to ask Rare Disease Research Lab to help you make a decision?

 [Multi-line free text entry]

Why do you think Rare Disease Research Lab should pay that amount?

 [Multi-line free text entry]

**MediRay Corp**

MediRay is a medical imaging company. They are based in the USA.

MediRay will use the classified pictures to create a new diagnostic machine that will be sold to hospitals. It will help doctors to diagnose people with a Rare Disease.

Total budget: $8 million

Expected profit (5 years): $25 million

Should MediRay be allowed to use this dataset?

 No, definitely not

 No, probably not

 Maybe, I'm not sure

 Yes, probably

 Yes, definitely

Roughly how much do you think MediRay should pay to use the dataset for this purpose? Please enter your answer in US Dollars.

 [Single-line free text entry. Additionally, a widget below the text input parsed the entered number and displayed text such as “If BioViz pays $1,000,000.00, each crowd worker will receive $79.37 for each hour that they worked.” ]

What are some things that you would like to ask MediRay to help you make a decision?

 [Multi-line free text entry]

Why do you think MediRay should pay that amount?

[Multi-line free text entry]

**Diagnostico Unido**

Diagnostico Unido is a medical technology company. They are based in Brazil.

Diagnostico Unido will use the classified pictures to create a new diagnostic machine that will be sold to hospitals. It will help doctors to diagnose people with a Rare Disease.

Total budget: $5 million

Expected profit (5 years): $18 million

Should Diagnostico Unido be allowed to use this dataset?

 No, definitely not

 No, probably not

 Maybe, I'm not sure

 Yes, probably

 Yes, definitely

Roughly how much do you think Diagnostico Unido should pay to use the dataset for this purpose? Please enter your answer in US Dollars.

 [Single-line free text entry. Additionally, a widget below the text input parsed the entered number and displayed text such as “If BioViz pays $1,000,000.00, each crowd worker will receive $79.37 for each hour that they worked.” ]

What are some things that you would like to ask Diagnostico Unido to help you make a decision?

 [Multi-line free text entry]

Why do you think Diagnostico Unido should pay that amount?

 [Multi-line free text entry]

**BioViz**

BioViz Medical Imaging

BioViz Medical Imaging is a medical imaging company. They are based in Sweden.

BioViz will use the classified pictures to create a new diagnostic machine that will be sold to hospitals. It will help doctors to diagnose people with a Rare Disease.

BioViz will donate five machines (worth $2 million) to hospitals located in lower-income countries.

Total budget: $8 million

Expected profit (5 years): $20 million

Should BioViz be allowed to use this dataset?

 No, definitely not

 No, probably not

 Maybe, I'm not sure

 Yes, probably

 Yes, definitely

Roughly how much do you think BioViz should pay to use the dataset for this purpose? Please enter your answer in US Dollars.

 [Single-line free text entry. Additionally, a widget below the text input parsed the entered number and displayed text such as “If BioViz pays $1,000,000.00, each crowd worker will receive $79.37 for each hour that they worked.” ]

What are some things that you would like to ask BioViz to help you make a decision?

 [Multi-line free text entry]

Why do you think BioViz should pay that amount?

 [Multi-line free text entry]